UNION CARBIDE

NUCLEAR DIVISION NEWS

A Newspaper for Employees of the Nuclear Division, Union Carbide Corporation

Vol. 5 — No. 9

May 2, 1974

QUESTION BOX ??

If you have questions on company policies, benefits, etc. or any other problems with which we might help, just let us know. Drop your inquiry to the Editor, Nuclear Division News. *(Or telephone it in to your plant news representative.) You may or may not sign your name. It will not be used in the paper.*

Questions are referred to the proper authorities for accurate answers. Each query is given serious consideration for publication.

Answers may be given to employees personally if they so desire.

QUESTION: Why doesn't ORNL hire more female janitors? Currently there is only one. A lack of applicants cannot be a factor, because I know of several women who have applied recently. I happen to know that it is not a low-paying job, and that there are quite a few women doing janitorial work at ORGDP and Y-12.

ANSWER: Your question has brought this matter to the attention of ORNL management and steps will be taken to fill a reasonable number of subsequent openings with qualified women.

QUESTION: In a recent Nuclear Division News, you state that Series E bonds interest rates "increase on a graduated scale, raising the yield to 6 percent, from issue to maturity." My question is what about after maturity? or must they be cashed then?

ANSWER: According to the Savings Bond Division of the Department of the Treasury, it is not necessary to cash your bonds at maturity. The new interest rates apply to all bonds you are holding regardless of when they were purchased.

QUESTION: Why are guards at the Y-12 Plant not allowed to have radios at their stations?

ANSWER: It is part of a guard's responsibilities to be alert to anything that goes on within his sight or hearing while on duty. He cannot read newspapers, books or magazines, entertain visitors or become involved in commercial radio programs and properly carry out these responsibilities.

QUESTION: What recourse does a weekly salaried employee have against division and supervisory personnel who are main factors in doing an employee out of a yearly merit raise (middle of salary bracket for classification) because personal, prejudicial, biased, or what have you, opinions are derived from self-evaluation rather than investigation of job performance with personnel the employee has been working for?

ANSWER: If you feel that you are being treated unfairly, you should discuss the matter with your supervisor. If he is not able to answer your questions, then you should arrange a meeting with higher supervision. If you have questions concerning the operation of the salary program as such, you may contact your facility Salary Administrator.

ORNL-ORAU undertake carbon-11 research

The Isotopes Development Center at ORNL is aiding a research team at Oak Ridge Associated Universities (ORAU) in a study of the use of carbon-11 in diagnosing cancer. The three-year study is supported by a $329,000 research grant awarded to ORAU by the National Cancer Institute.

The research will be done at ORAU under Raymond L. Hayes, a senior scientist. "The goal of the carbon-11 study is to develop and evaluate radiopharmaceutical agents for the early diagnosis of cancer in man," he explained.

Carbon-11 is a radioisotope used by physicians as a medical tracer, or radiopharmaceutical. It is combined with drugs or chemicals and used to locate and assess cancers within the body of a patient.

"Our carbon-11 research is expected to broaden the physician's capabilities for detecting cancer in humans," said Hayes.

In order for diagnostic tests to be effective and reliable, an organ - the kidney or the liver, for example - or other tissue in the body must selectively absorb the radioactive drug. That is, the drug must concentrate in certain parts of the body. The concentration must be high enough for the radiation to be detectable, but the amount of radioactivity needed to reach that level must not be so great that it will injure the person being examined.

Hayes emphasizes, however, that the goal is still in the future. "Only after a procedure is tested in animals and appears worthy of clinical trial, and is approved by the U.S. Food and Drug Administration, will it be tested in patients."

WIND AND RAIN MEASURING — John C. Moyers, left, of Oak Ridge National Laboratory's Reactor Division, and Walter O. McGill inspect the placement of wind velocity and rain measurement gages on a mobile home structure being used in a data-gathering study. The study, funded by the National Science Foundation, is aimed at developing improved construction standards to make mobile homes more economical in the use of energy. (Is the mobile home an economical energy-user? Complete story is on page two.)

UCC sales, income set new records for 1st quarter

Final first-quarter results reported by Union Carbide show net income of $94.1 million, or $1.54 a share, 42 percent higher than the $66.3 million, or $1.09 a share, earned in the same period a year ago.

Both earnings and sales set new records. Total sales for the first three months were $1,109.6 million, 23 percent above the $905.5 million achieved in the corresponding period a year ago.

Commenting on the good results, F. Perry Wilson, chairman of the board, said demand for Union Carbide's products continues at a high level and the corporation's biggest problem is lack of sufficient capacity to supply the full needs of its customers. He added, "I believe that unless there is some unexpected set-back our sales and earnings during the remainder of 1974 should be very satisfactory."

During the first quarter, Wilson noted, sales gains were strong in all major product lines in the United States and in nearly all geographic areas around the world in which Union Carbide operates. Domestic sales grew by 15 percent, with the strongest gains in industrial gases, carbon products and special metals. International sales increased by 38 percent.

The second beneficial influence was the increased availability of hydrocarbon feedstocks in the latter part of the quarter, compared with the situation during December and January. This has enabled Union Carbide to improve its domestic petrochemical operating rate from about 80 percent of capacity in January to between 90 and 95 percent at the end of the quarter.

Is the mobile home utilizing energy economically?

By Robert L. Wesley

154848

Engineers at Oak Ridge National Laboratory have begun a study to determine the contribution of mobile homes to national energy consumption and to search for economically feasible ways to reduce energy required to heat and to cool this type of housing.

The study is supported by the National Science Foundation in cooperation with the U. S. Atomic Energy Commission. Roger S. Carlsmith directs the NSF energy studies at ORNL.

John C. Moyers, director of the mobile home study, said the project was undertaken because mobile homes have certain design characteristics that make them relatively inefficient in the use of energy and because this type of housing is growing rapidly throughout the nation. According to Moyers, this combination of factors makes energy economy measures for mobile homes a vital part of the nation's overall energy conservation program.

Uneconomical features

Moyers emphasized that the purpose of the study is not to hamper the mobile home industry, but to assist such groups as the American National Standards Institute in upgrading mobile home construction standards to provide for more economical use of energy. He believes that most mobile home manufacturers would welcome the upgrading of construction standards in the industry.

He pointed out that mobile home sales last year accounted for approximately one-third of all new housing, and since 1970 has accounted for over 90 percent of all new housing units priced below $15,000. Moyers estimated that there will be approximately 5.3 million mobile homes in use by 1980 and nine million by 1990, an increase from 3.3 percent of total homes in 1970 to 10.3 percent in 1990.

He said the design characteristics that make mobile homes uneconomical in the use of energy include: the linear geometry of the structures - designed for roadway travel - which causes more exposed wall area; the use of light-weight, thin-walled materials in construction; flat roof with no overhang that could permit some shading of walls and windows during hot summer months; and lack of enclosed crawl space above or below the structure.

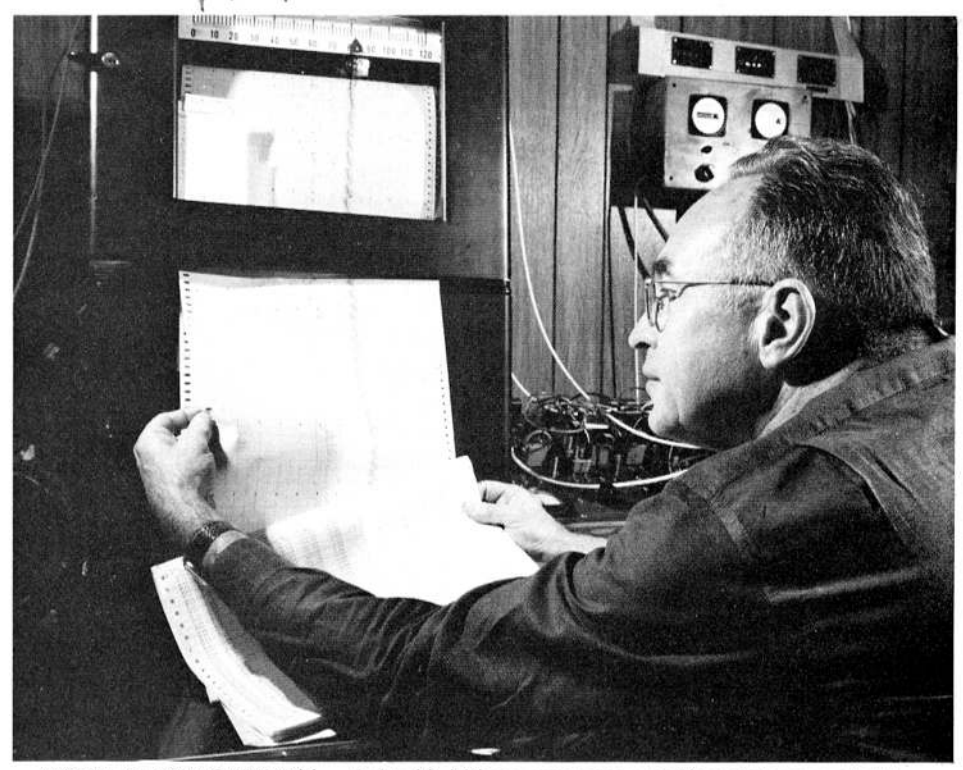
No FHA standards

"The median income of mobile home buyers is about $8,500, compared to more than $13,000 for buyers of conventional new housing," he said. "Thus, the purchaser of a home in this price range could be sorely burdened, compared to other consumers, by large utility cost increases for heating and cooling. Since cost increases have already occurred and will increase over future years, it is especially important to explore for opportunities to provide these consumers more energy-efficient structures. Mobile homes are produced in factories and should be more susceptible to quality control, unified system design and engineering innovation than custom-built homes."

Although the Federal Housing Administration insures mortgage loans for the purchase of mobile homes, it has not yet developed its own standards for their design and construction. The FHA relies on an American National Standards Institute (ANSI) standard, a voluntary, industry-developed standard which specifies requirements for structural integrity, materials, lighting, plumbing, heating and electrical systems, and includes maximum heat loss specifications. Under the current version of the ANSI standard, the maximum permissible heat loss is 40 Btu per hour per square foot of floor area or 275 Btu per hour per foot of perimeter, whichever is the greater.

High heat loss

Pointing out the limitations of some types of mobile home units, Moyers said, "The allowable heat loss based on perimeter is always greater than that based on floor area for 12-foot-wide units. For example, for a 12-foot by 60-foot unit, the loss based on perimeter is equivalent to 55 Btu per hour per square foot of floor area. This loss is 28 percent greater than the permissible loss specified by FHA's 1971 standard for conventional single-family dwellings."



MOBILE HOME STUDY — John V. Wilson compares weather data recorded by a mobile home's weather recording instruments with a computer-predicted performance.

As the study progresses, ORNL will attempt to determine current standards, construction practices and reported performance of mobile homes and associated heating and cooling units; review and compare pertinent federal, state and local codes and ordinances; determine regional distribution of mobile homes and owner characteristics with current and historical trends, regional differences in insulation, types of heating and cooling systems; obtain, through literature review and interview of mobile home sales and marketing people as well as selected mobile home buyers, an estimate of the relative influence of purchase cost versus operation and maintenance costs on buyer preferences.

Model unit used

An important part of the study will involve the development of a model that will enable the study group to vary such parameters as cost of energy, cost of money, efficiency of heating and cooling system, thermal efficiency of the structure, geographical orientation, latitude and degree of shading, to determine "best buys." To assist in obtaining data for this model, the ORNL engineers are using a mobile home structure, approximately 12 feet by 40 feet, equipped with instrumentation to measure power input, weather data, skin temperature and heat fluxes during both heating and cooling seasons.

Participating in the study with Moyers are John V. Wilson, Sydney J. Ball and Fred A. Heddleson.

154850

GATHERING VITAL DATA — Sydney J. Ball, foreground, of ORNL's Instrumentation and Controls Division, and Walter O. McGill, of the Y-12 Plant's Maintenance Division, check the operation of data-gathering instruments inside a mobile home.

TSPE installs new slate of officers

The Oak Ridge Chapter of the Tennessee Society of Professional Engineers installed new officers on April 18. The new slate was installed by George Pope, president of the TSPE. They are: president, Fred W. Stout Jr.; president-elect, Charles R. Gee; vice-president, John W. Hill Jr.; secretary, William J. Mason; treasurer, D. R. Brown; chapter directors, J. E. Rhew and D. B. Alkin; state directors, Kenneth R. Haeisler and Ted Shapiro.

Division Deaths

James L. Frazier, Oak Ridge Gaseous Diffusion Plant's operations department, died April 19.

A native of Milledgeville, Mr. Frazier came to ORGDP late in 1944, as a chemical operator.

Mr. Frazier

Survivors include his wife, Mrs. Mary Lynn Frazier; 105 Disston Road, Oak Ridge; a daughter, Sherry; sons, James L., and Terry D.; his parents, Mr. and Mrs. Leo W. Frazier; and a brother, Robert N. Frazier.

Funeral services were held at the Shackelford Funeral Home, Savannah, Tenn., with the Rev. Jimmy Pate officiating. Burial followed in Milledgeville.

RETIRED Y-12 CARPENTER

Samuel Cowden, who retired from Y-12 in 1967, died recently in a nursing home in Knoxville. He was survived by his wife, Mrs. Lottie Headrick Cowden, a daughter, Mrs. Mary Jane Cartwright, a brother, five sisters, two grandchildren, and one great-grandchild. Funeral services were held in the Weaver's Funeral Home, with burial in Knoxville's New Gray Cemetery.

RETIRED Y-12ER

Karl E. Kahley, retired supervisor from the Y-12 Plant, died recently in Sarasota, Fla. He is survived by his wife and two sisters. Mr. Kahley retired from Y-12 in 1963, after working nearly 20 years in the plant. He was a native of Snyder County, Pa., and a graduate of Pennsylvania State University.

Several recent promotions announced at ORGDP

Several promotions were announced recently at the Oak Ridge Gaseous Diffusion Plant.

Michael W. Ayers has been named an inspector in the Barrier Manufacturing Division.

A native of LaFollette, he joined Union Carbide in 1972. Ayers attended Lincoln Memorial University.

Married to the former Kathy Brown, Ayers lives at Route 3, College Hill, LaFollette.

Maintenance foreman

Kenneth E. Bane has been promoted to a maintenance foreman in the Fabrication and Maintenance Division.

A native of Harriman, he is a veteran of the U. S. Navy, and worked at Hayes Aircraft and Tennessee Forging Steel before joining Union Carbide in 1968.

Bane has a daughter, Regina, and lives at Route 2, Harriman.

Laboratory supervisor

Edward S. Burnette is a new laboratory supervisor in the barrier quality control department.

A veteran of the U. S. Army, he was born in Clinton. He attended The University of Tennessee and National Business College.

Burnette joined Union Carbide in 1952, and is active in the Tennessee National Guard.

Mrs. Burnette is the former Louise Riopel. The couple has four children, Stephen, William, Joan and Michael, and lives at 402 Greenwood Drive, Clinton.

Lonnie E. Cochran has been named a dimensional and instrument inspector in the Laboratory Division.

A native of Harriman, he attended UT, and worked in the Y-12 Plant four years before transferring to ORGDP last fall.

Mrs. Cochran is the former Jeri Lynn Felknor, and they live at Route 2, Kingston.

Promoted to foreman

Bobby Lee Collier has been promoted to a lubrication foreman in the Fabrication and Maintenance Division.

He was born in Harriman, and has been employed with the Boy Scouts of America, as a Scout executive, and with the Roane County Highway Department as a safety and administrative assistant. He joined ORGDP last year.

Collier has a B.S. degree in management from Tennessee Technological University.

Mrs. Collier is the former Peggy Eggert. They have a small son, Robert L. Collier III, and live at 211 Woodlawn Avenue, Kingston.

Optical technician

Evelyn M. "Lynn" Foust has been named an optical technician in the Medical Division.

Mrs. Foust, a native of Rockwood, worked in the emergency room of the Oak Ridge Hospital before joining ORGDP last year.

Mrs. Foust and her husband, Sgt. C. Gene Foust, live at 138 Parsons Road, Oak Ridge. They have two children, Joey and Jeff.

Howard S. Giles, who came to ORGDP in 1972, has been made a roads and grounds foreman in general maintenance.

A native of Oliver Springs, he attended UT and worked at Thompson's Botanical Nursery before joining Union Carbide.

He lives at Route 3, Oliver Springs.

PH74-1167 PH74-1159 PH74-993 PH74-1169

Ayers Bane Giles Gracey

PH74-1168 PH74-1160 PH74-1157 PH74-1121

Burnette Cochran Hackworth Ludwig

PH74-1128 PH74-923 PH74-1116 PH74-992

Collier Mrs. Foust Mrs. Manis Osborne

PH-74-1156 PH-74-1120

Turley Turner

Sammie H. Gracey has been promoted to a foreman in the Fabrication and Maintenance Division.

A native of Davis, Tenn., he came to ORGDP last year, after being employed in Y-12 three years. He served 20 years in the U. S. Navy.

Mrs. Gracey is the former Geneva Drewry, and they live at Route 3, Tacora Hills, Clinton. They have a daughter, Dianne.

James M. Hackworth, a new maintenance foreman in Fabrication and Maintenance, joined Union Carbide first at Oak Ridge National Laboratory. He worked overseas in Greenland and Cuba and with the U. S. Pipe, Mead Corporation and Chrysler Corporation prior to his Carbide employment. He attended UT.

Supervisory trainee

A native of Clinton, he still lives there, at Route 5. Mrs. Hackworth is the former Peggy Ann Saunders. They have two sons, James Jr., and Samuel; and a daughter, Patricia.

Floyd J. Ludwig has been named a supervisory trainee in the Barrier Manufacturing Division.

A native of Denver, Colo., he attended UT, and came to ORGDP last year, after working more than three years in Y-12 and three years at ORNL.

Mrs. Ludwig is the former Jessie Tallman, and the couple lives at 213 Barberry Drive, Knoxville. They have three children, Mark, Gregory and Robert.

Gladys D. Manis has been named an industrial relations representative. She joined Union Carbide in 1960, after working for a Knoxville physician. She is a graduate of Draughon's Business College.

Mrs. Manis lives with her husband, Curtis, at Route 4, Ivy Avenue, Lenoir City. They have a son, Dan. Her husband is employed in the Y-12 Plant.

Robert C. Osborne has been made a supervisory trainee in the Barrier Manufacturing Division.

A native of Jonesville, Va., he has attended UT, and came to ORGDP last year, after working more than 20 years at ORNL.

Mrs. Osborne is the former Nila McConnell, and they live at Route 1, Clinton. They have four children, Carol Smith, Linda Nelson, Bobby and J.T.

Thomas A. Turley Jr. has been made a laboratory supervisor in the Laboratory Division.

A native of Wytheville, Va., he holds a B.A. degree from Emory and Henry College and has done graduate work at UT. He joined Union Carbide in 1954.

Mrs. Turley is the former Catherine Caen, and they live at 111 Wayside Road, Oak Ridge. They have two children, Thomas A. III, and Margaret.

Carl W. Turner was promoted to a laboratory supervisor in the Separations Systems Division. He joined Union Carbide more than two years ago, after serving 22 years in the U. S. Air Force.

Turner attended Gaston College and the University of North Carolina.

Mrs. Turner is the former Faye Fussell. They live at 114 Amherst Lane, Oak Ridge, and have two children, Jenny Patterson and Joe.

COMPANY Service 20 25 30

Y-12 PLANT
30 YEARS

Russell Hopper, dimensional inspection; Manford C. Bays, materials department; Jessie G. Spears, mechanical inspection; Charles W. Mason, research services; George I. Miller, chemical services; Harrell E. Patterson, special services; Lissie A. Reynolds, ORNL chemical services; George B. Marrow, Development Division; Bertha M. Melson, Development Division; Francis V. Tilson, A wing shops; and Charles E. Fritts, materials department.

25 YEARS

Calvin W. Lunsford, Everett L. Douglas, Oscar M. Kelly, Edward W. Pipes and Helen L. Ross.

20 YEARS

Walter F. Stancell, Archie B. Blevins, Raymond J. Brown, Eugene J. Hill, Thomas C. Pack, James L. Evans, Jack C. Jernigan, David L. Jennings, Thomas B. Reed, Earl E. Grissom, Leonard W. Nance, John H. Worthington, William B. Stephens, Ephriam H. Vineyard Jr., Everett H. Ashton, Fred L. Clark, Robert H. Hall, Robert E. Jones, Glenn W. Howdyshell, Hansel Whaley, Otey B. Cottrell, Charles Baxter, Vernon D. Cooper, Carl W. Nelson, Jack D. Cox, Robert M. Hetzler, Dillard H. Jenkins, Claude Allen, James L. Billings, Edgar W. Phelps Jr., James W. Halsey, Joseph L. Waddell, Aaron Smith and Lynden W. Moneymaker.

ORGDP
30 YEARS

James S. Barr, U-235 separation; Junior H. Burney, guard department; Lester A. Smith, laboratory administration; Luther M. Lively, development maintenance; Watts H. Stout, fabrication shops department; Ira C. Marshall, guard department; Louis R. Jones, instrument fabrication; Everette A. McCollum, project maintenance; Lucille R. Thackston, material services; James K. Lowery, chemical analysis; Sidney A. Speckter, shop services; James M. Young, guard department; and Margaret L. Poole, operations analysis.

20 YEARS

Stanley E. Groothuis and Claude E. Leonard Jr.

PADUCAH
30 YEARS

Virginia O. Wright, Finance and Materials Division.

20 YEARS

Charles E. Harris.

GENERAL STAFF
30 YEARS

Margaret Elizabeth Wilson, data processing; Mary C. Galloway, purchasing; John M. Googin, general staff; and Edward C. Witt, systems and administration.

20 YEARS

Horace M. Whittlesey and W. Dave Ghormley.

Next Issue

The next issue will be dated May 16. The deadline is May 8.

How does Union Carbide's group

★ ★ ★ ★

(Editor's note: This is the first in a series of articles describing Union Carbide's program of employee benefits. The first article is on the subject of Group Insurance. Following in the series will be the Savings Plan and the Pension Plan. Booklets describing each of these three employee benefits will be mailed to the home of every employee within the coming weeks.)

Collectively we may purchase greater coverage for less cost

The year is 1924. Joe Smith, a 25-year-old employee of Company X, dies of a heart attack, leaving a wife and three young children. Joe carried a $500 policy, independently of course, because there was no group insurance. He would have subscribed to more insurance, but it was an additional expense he felt he couldn't afford. Besides, according to his way of thinking, he would live to a ripe old age and his family wouldn't need it anyway. By the time he passed on, the three children would be grown and married and able to take care of their mother. Joe was wrong.

With Joe gone, his friends, neighbors, fellow employees and relatives contribute food and clothing to the family and pass the hat to collect a small fund for the widow to support herself and her children for a few weeks. She is faced with monthly payments on a small rental house and a very grim battle to enable her children to reach adulthood.

This hypothetical case may seem overdrawn or maudlin to many of today's business and industrial employees who take group life insurance benefits for granted. Yet, this benefit is less than 50 years old in the majority of American businesses. The principal advantage of the group life insurance plan is that an individual can afford to purchase a far greater amount of life insurance protection than he or she could purchase independently.

UCC, a pioneer

Union Carbide Corporation was one of the first industrial firms to adopt a group life insurance program that could provide an employee's survivors with a more substantial sum than could be expected by passing a hat. The company began the insurance program in 1927, offering a $3,000 maximum. In 1928, the maximum was raised to $10,000. The program has been improved through the years so that today's employee can assure his survivors of at least two years' annual salary if he should die while employed by the company. The underwriter is one of the nation's largest insurance firms. Union Carbide pays over half the premium cost for the basic insurance.

Employees also can have additional coverage equal to at least another year's annual compensation by enrolling for supplemental life insurance protection and paying a small additional premium.

Most employees subscribe

Let's return to our unfortunate friend, Joe Smith, and place him in a 1974 setting. Imagine that Joe is an hourly roll Nuclear Division employee who earns approximately $9,000 per year. Joe is therefore eligible for $18,000 in basic life insurance at a cost of only $1.53 per week. He also is eligible for an additional $9,000 in supplemental life insurance at a cost of $0.52 per week. This means a total of $27,000 in group life insurance for $2.05 per week, or $106.60 per year, since our hypothetical Joe is a 25-year-old. With $27,000, in addition to any other policy that Joe might have carried independently, his survivors would appear to have a better chance of survival than their counterparts of 50 years ago.

Apparently, most Nuclear Division employees recognize the value of the group life insurance program, because more than 95 percent of them subscribe to the basic life insurance plan. Most financial advisors will agree that it's also a good idea to carry additional term or permanent life insurance independently in addition to the group insurance.

Generally, life insurance is paid in a lump sum at death. However, an employee has the option of other terms of payment. These include: interest payments at specified periods for up to a maximum of 30 years, with the principal payable at the end of the interest period; periodic installments up to a maximum of 20 years with the remaining principal earning interest; a life income in periodic payments equal to at least the full value of the employee's life insurance. These payment options also may be determined by the beneficiary after an employee's death.

How does it compare?

It is vitally important that the list of beneficiaries be kept current with the employee's wishes. Sometimes deaths, births, changes in marital status or other factors may cause an employee to alter his beneficiary or beneficiaries.

Just how does the group life program compare with other leading industries, federal agencies and a large state university in regard to total amounts of principal available to employees?

A survey was made in 1973 of 15 leading American industries to determine what amounts of life insurance were paid to survivors of active employees. Those in the survey, in addition to Union Carbide, were General Motors, U. S. Steel, DuPont, Monsanto, Goodyear, Alcoa, Kodak, Mobil, American Telephone and Telegraph, International Business Machines, Consolidated Can, American Cyanamid, Standard Oil of New Jersey and General Electric. Also surveyed were the Tennessee Valley Authority, the U. S. Atomic Energy Commission, the Federal Postal Service and The University of Tennessee. The following table was compiled.

Amount of Life Insurance

	Less than 2X Annual Earnings	2X Annual Earnings	Based on Co. Service	Based on Age
15 Industries	6	7*	1	1
Federal Employees & State University	4			

*Includes Nuclear Division

Basic Annual Salary	Basic Life Insurance	Supplemental Life Insurance	Basic Life Ins. Cost Weekly	Basic Life Ins. Cost Monthly
$4,000.01 to 4,500.00	$9,000	$4,500	$0.76	$3.33
4,500.01 to 5,000.00	10,000	5,000	0.85	3.70
5,000.01 to 5,500.00	11,000	5,500	0.93	4.07
5,500.01 to 6,000.00	12,000	6,000	1.02	4.44
6,000.01 to 7,000.00	14,000	7,000	1.19	5.18
7,000.01 to 8,000.00	16,000	8,000	1.36	5.92
8,000.01 to 9,000.00	18,000	9,000	1.53	6.66
9,000.01 to 10,000.00	20,000	10,000	1.70	7.40
10,000.01 to 11,000.00	22,000	11,000	1.82	7.91
11,000.01 to 12,000.00	24,000	12,000	1.94	8.42
12,000.01 to 13,000.00	26,000	13,000	2.06	8.93
13,000.01 to 14,000.00	28,000	14,000	2.18	9.44
14,000.01 to 15,000.00	30,000	15,000	2.29	9.95
15,000.01 to 16,000.00	32,000	16,000	2.41	10.46
16,000.01 to 17,000.00	34,000	17,000	2.53	10.97
17,000.01 to 18,000.00	36,000	18,000	2.64	11.48
18,000.01 to 19,000.00	38,000	19,000	2.76	11.99
19,000.01 to 20,000.00	40,000	20,000	2.88	12.50

What does an employee do in case of a disability?

One of the most tragic things that can happen to a person is to become permanently disabled so that he is unable to work and earn a living for his family. The Union Carbide Group Insurance Plan has provisions for disabilities not covered under the Workmen's Compensation Act.

To place the disability benefit in perspective, let's suppose that 45-year-old Harry Jones falls from a ladder while painting his house and injures himself so that he apparently is paralyzed for life. Harry is enrolled in the Group Insurance Plan for $22,000 of basic life insurance and $11,000 of supplemental life. Three months after Harry has provided proof of his total disability to the insurance company, he will receive his first disability check. According to the disability benefits table, he will be eligible to receive up to $20,000 (the maximum for all subscribers) in monthly installments over five, 10, 15 or 20 year periods. (See disability benefits table.)

DISABILITY BENEFIT

Number of Monthly Instalments	Monthly Payment Per $1,000 of Basic Life Insurance
60 (5 years)	$18.00
120 (10 years)	9.78
180 (15 years)	7.07
240 (20 years)	5.73

Thus, if Harry elects to receive his installments over a five-year period, he will receive $360 per month. Or, he may choose $195.60 per month for 10 years; or $141.40 per month for 15 years; or $114.60 per month for 20 years.

The amount of basic life insurance that Harry had over $20,000 - in this case, $2,000 - remains in force until Harry is 65, at no cost to him. His supplemental life insurance, $11,000, also remains in force at no cost to him until age 65.

Start on fourth day

For hourly roll employees, sickness and accident benefits are included in the group life program. If an hourly employee is absent from work because of a temporary disability, he receives $40 a week if the disability is not covered by Workmen's Compensation, for up to 26 weeks for each period of disability. If the disability is covered by Workmen's Compensation, he receives $16 a week (in addition to other appropriate income) for up to 26 weeks for each period of disability.

Benefits start on the fourth day of absence and continue as long as the disability lasts, up to the 26-week maximum period. The employee must, of course, be under the care of a licensed physician and submit evidence of disability to the insurance company.

insurance compare with others?

Supplemental Life Insurance Cost by Age Bracket					
Under Age 40		Age 50-54		Age 55-64	
Weekly	Monthly	Weekly	Monthly	Weekly	Monthly
$0.26	$1.12	$0.67	$2.92	$1.66	$7.20
0.29	1.25	0.75	3.25	1.85	8.00
0.32	1.37	0.82	3.57	2.03	8.80
0.35	1.50	0.90	3.90	2.22	9.60
0.40	1.75	1.05	4.55	2.58	11.20
0.46	2.00	1.20	5.20	2.95	12.80
0.52	2.25	1.35	5.85	3.32	14.40
0.58	2.50	1.50	6.50	3.69	16.00
0.63	2.75	1.65	7.15	4.06	17.60
0.69	3.00	1.80	7.80	4.43	19.20
0.75	3.25	1.95	8.45	4.80	20.80
0.81	3.50	2.10	9.10	5.17	22.40
0.87	3.75	2.25	9.75	5.54	24.00
0.92	4.00	2.40	10.40	5.90	25.60
0.98	4.25	2.55	11.05	6.27	27.20
1.03	4.50	2.70	11.70	6.64	28.80
1.09	4.75	2.85	12.35	7.01	30.40
1.15	5.00	3.00	13.00	7.38	32.00

Life insurance after retirement

Suppose you are due for retirement soon. Does your group life insurance coverage continue, or is it dropped the day you retire?

When a Union Carbide employee participating in the Group Insurance Plan qualifies for retirement, a reduced amount of basic life insurance is continued - at no cost to the employee - for the rest of his life. If he has been a member of the plan for at least five years, the actual amount of coverage will equal one percent of his basic life insurance, just before retirement, multiplied by the number of years of company service credit, plus $500, up to a maximum of $10,000. The minimum for such employees is $2,500 in coverage.

Cost-paid coverage

Retiring employees who have been members of the plan for at least one year but less than five years will have $625 cost-paid coverage. If an employee has been in the plan for less than one year, coverage stops at retirement.

Retirees who were in the plan for at least five years also have a special provision for medical expenses after retirement. When the reduced retirement basic life insurance starts, an employee can use any insurance amounts above $1,250 to help pay certain medical expenses for himself and eligible dependents. For example, if the employee has reduced life insurance of $5,000, a total of $3,750 could be used throughout retirement years for medical bills.

The supplemental life insurance coverage is discontinued at age 65. However, the employee can convert the basic and supplemental coverage to an individual policy, provided he applies to the insurance company within 31 days after date of retirement. The cost, which is high, will depend on the type of policy selected and the employee's age.

What of early retirement?

If an employee retires before the age of 65 and qualifies for reduced retirement life insurance, he has two options concerning the way his basic life insurance coverage will be applied. He can continue up to age 65 the full amount of the basic life insurance he had as an active employee by continuing to make regular contributions for it. At age 65, this coverage will be reduced automatically with no further cost to the employee.

Or, the employee can take the reduced basic life insurance coverage immediately with no further cost to himself.

If an employee selecting early retirement decides to continue his basic life insurance coverage until age 65, he also may continue to subscribe to the supplemental life insurance coverage by continuing to make the regular contributions for it.

Sickness-accident benefits

An hourly employee is eligible for up to 26 weeks of benefits for each separate disability that is due to a different and unrelated cause if he has returned to active work between absences, or for successive periods of absence due to the same disability if he has returned to active work for at least three months. Otherwise, successive periods of absence due to the same disability or a continuous absence due to more than one disability are considered one disability period, and benefits are payable only up to the 26-week maximum.

The sickness and accident benefits are cancelled at termination of employment. However, if an employee is disabled at that time, any sickness and accident benefits being received will be continued during that disability. In the event the employee has a pending claim, consideration will be given to that claim as if the employment had not terminated.

A Reminder For Women

You don't have to announce the fact, but if you are over 40, the American Cancer Society hopes that you will see your physician if you notice any unusual bleeding or discharge. It need not be cancer but it should be checked out.

Calendar of EVENTS

TECHNICAL

May 3

Chemistry Division Seminar: "Radioactivity of Lunar Samples, or Searching the Texas Badlands for Oil, Oysters and Moonrocks," G. Davis O'Kelley. East Auditorium, Building 4500N, 3 p.m.

May 7

University of Tennessee Department of Chemistry General Seminar: "Minicomputer and Microcomputer Applications in Chemical Analysis," Professor Sam P. Perone, Purdue University. 414 Buehler Hall, UT Campus, 4 p.m.

May 7-10

Gas-Cooled Reactors-HTGR and GCFBR Conference: Riverside Motor Lodge, Gatlinburg.

May 8

Chemical Technology Division Seminar: Radioactive Materials in Process Effluents - "Removal of Radium from Uranium Mill Tailings," F. G. Seeley; and "Tritium Behavior During Shale Oil Recovery After a Nuclear Explosion," W. D. Arnold. Central Auditorium, 4500N, 3 p.m.

May 13

University of Tennessee Department of Chemistry DuPont Lectures: "The Nature of Dioxygen-Metal Bonds in Simple Complexes and in Proteins," Professor Harry B. Gray, California Institute of Technology. Room 300, Buehler Hall, UT Campus, 8 p.m.

May 13-14

Physics Division Information Meeting: Oak Ridge National Laboratory.

May 14

University of Tennessee Department of Chemistry DuPont Lectures: "Electron Transfer Pathways Employed by Metalloproteins," Professor Harry B. Gray, California Institute of Technology. Room 414, Buehler Hall, UT Campus, 4 p.m.

May 15

Chemical Technology Division Seminar: "Waste Fractionation," W. D. Bond. Central Auditorium, Building 4500N, 3 p.m.

Y-12 PLANT

RIDERS from vicinity of West Town via Kingston Pike to Cedar Bluff Road, Middlebrook Pike to Hardin Valley Road, via Oak Ridge Connector, to any portal, straight day. Jim George, plant phone 3-7277, home phone Knoxville 693-6214.

JOIN car pool from Olmstead Lane area, Oak Ridge, to East Portal, straight day. George F. Smith, plant phone 3-5308, home phone Oak Ridge 483-3127.

ORGDP

RIDE from University of Tennessee area to Portal 5, straight day. Pat Franklin, plant phone 3-3341.

NUCLEAR DIVISION NEWS

UNION CARBIDE

Published twice-monthly for
The Employees Of
UNION CARBIDE CORPORATION
NUCLEAR DIVISION

James A. Young, Editor, Y-12
Ext. 3-7100
Ruby Miller, Assoc. Editor, ORNL
Ext. 3-6421
Keith Bryant, Paducah
Bell 369
Doug Carter, ORGDP
Ext. 3-3434

—Member—
APPALACHIAN INDUSTRIAL EDITORS' ASSOCIATION
INTERNATIONAL ASSOCIATION OF BUSINESS COMMUNICATORS

Office
Post Office Box Y
Oak Ridge, Tenn. 37830

COMPANY Service 20 25 30

ORNL

30 YEARS

Ernest E. Pierce, Isotopes; William E. Brundage, Solid State; Louis L. Fairchild, Chemical Technology; Charlie Williams, Isotopes; Roger G. Mansfield, Information; James A. Harris, Laboratory Protection; John H. Brock, Chemical Technology; Francis A. DiCarlo, Physics; and Bernard G. Jenkins, Isotopes.

25 YEARS

Marvin Davis, Haskell Stinnett and Gladys L. Arthur.

20 YEARS

Marion H. Cooper, Hans O. Cohn, Vernon E. Walker, Paul F. Swaggerty, William H. Wagner, Alice N. Montgomery, Clarence E. Stevenson, Homer Blevins, N. Marion Ferguson and Charles C. Barnette Jr.

Carl E. Parrott, Ada F. Misek, William R. Musick, Grover D. O'Kelley, Robert H. Sigler, Dwight P. Madewell, Edward B. Cagle, John R. Jones Jr., Vaughan S. Throop and Gene C. Jenkins.

Charles W. Leinart, Charles D. Griffies, Melvin C. Hill and William M. Sproule.

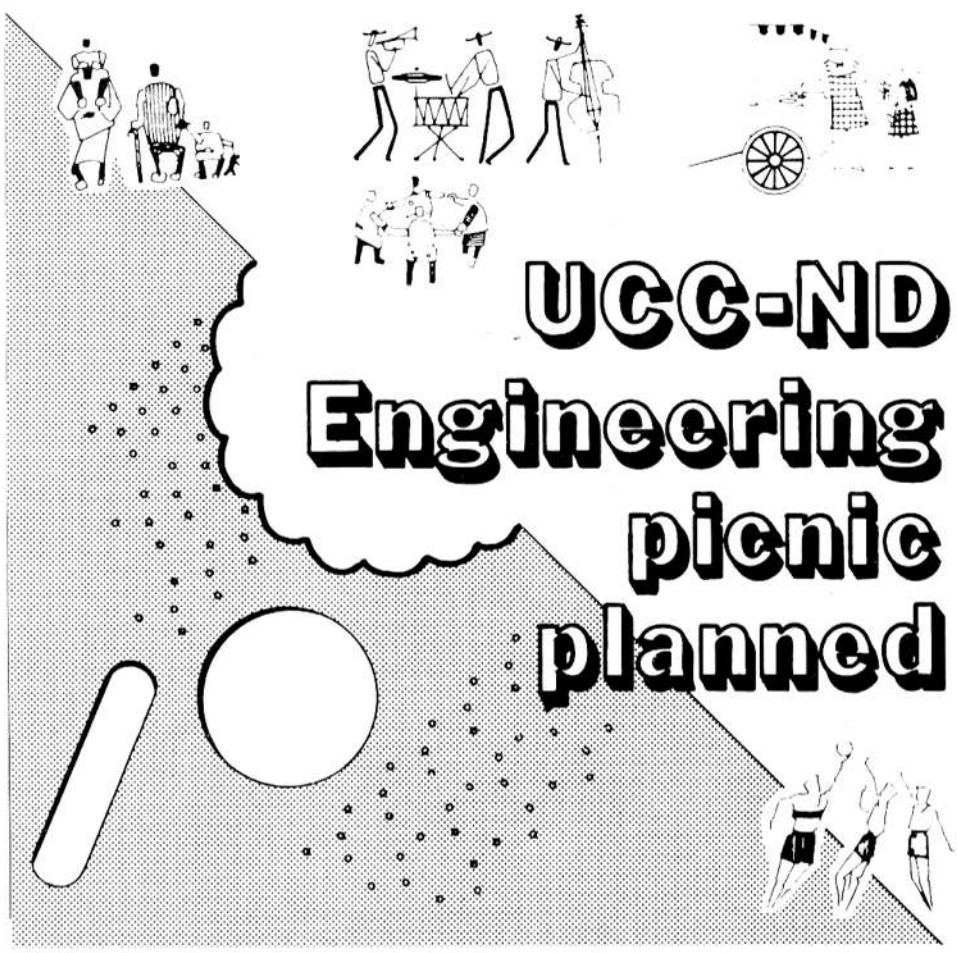
RELIGIOUS ARTS FESTIVAL

The fifth open show on religious art is set by the Grace Lutheran Church, Oak Ridge, for May 17-19. Entries will be received at the Art Center May 13-14. Entries will be in the painting, drawing, graphics, sculpture, crafts and photographic prints . . . all of a religious nature. A $100 first prize will be offered for the "best of show." Further information may be obtained from the church office, 483-3787.

THE LAST WORD

There are two things some people never seem to get — all they deserve and all they want.

RECREATIONOTES



THE UCC-ND ENGINEERING DIVISION (ORNL, ORGDP and Y-12) WILL HOLD ITS ANNUAL PICNIC SATURDAY, JUNE 1. A VARIETY OF ACTIVITIES IS PLANNED. DETAILS WILL FOLLOW IN THE NEXT ISSUE.

Y-12 BOWLING

The Rollmasters and Rounders came to the end of the C League season tied for first place, four points ahead of the Sunflowers. Walt Goodwin's 657 scratch, 705 handicap is still high for the last half.

The Classic League rolled to a halt with a three-way tie for top rung . . . with the Markers, Has Beens and Mets up there only one-half a point ahead of the Rebels, in one of the hottest last-ditch races in years. Len Hart's 642 scratch series was a highlight of the second half.

The Alley Cats finished atop the Y-12 Mixed League edging out the Hits & Misses by one and one-half points. In the roll-off with the Splinters, however, they lost by less than 10 pins.

ORGDP BOWLING

The Uptowners are one-point leaders in the ORGDP Women's League, with the Payoffs in second place. Mary Foley and Marie Hickson paced the women recently.

The City Slickers are still atop the Tuesday League, two ahead of the Double X crowd. R. J. Fraser recently rolled hot, posting scores of 223 scratch, 258 handicap in singles; and series of 606 and 711!

The Wednesday League belongs to the Sandbaggers, out of reach of the Planners, or anyone else. George Bullock rolled a 706 handicap series to liven up the scene recently.

One big trouble with doing nothing is - you can't stop and rest.

Tee-Off Time Application for May 18

(Check Appropriate Plant)

☐ ORGDP – WALLACE HILLS
☐ ORNL – DEAD HORSE LAKE
☐ Y-12 – CEDAR HILLS

Check

_____ LEADER _____ _____

_____ Phone Bldg.

_____

_____ _____
Time Preferred

COMPLETE AND RETURN TO YOUR RECREATION OFFICE

Entries must be received prior to drawing on May 15, 2 p.m.

ORGDP—Building K1001—C-Wing—MS 122
ORNL/Y-12—Building 9711-5

Tee-off times for all tournaments will be drawn on Wednesdays prior to each Saturday's tournament. Golfers are responsible for reserving their own carts by contacting the pro shop following drawing for tee-off times.

PATTERNS AND SHAPES — John Blankenship's abstract photograph placed high in competition for the Carbide Camera Club's April theme of still lifes, patterns and shapes.

Pictorial and scenic color slides set for Camera Club competition

The Carbide Camera Club's next meeting is set Tuesday, May 14 at 7:30 in Cheyenne Hall, Room D-213.

Bill Billings, a commercial photographer from Rockwood, will discuss the art of action photography in sports and will demonstrate some new equipment. Billings and his associates are responsible for filming, processing and editing movies of local sports, particularly on the high school scenes.

May's competition is color slides of pictorial and scenic subjects.

The public is always welcome at the Camera Club's meetings. John Blankenship is president for 1974, and may be able to supply additional information on enrolling. His extension is 3-3533.

FISHING RODEO

D Shifters in the Y-12 Plant enjoyed a Spring outing recently on Watts Bar Lake, near Blue Springs.

Taking prizes for crappies, in winning order, were Ron Milligan, Everett Smith, Joe Morgan, Everett Forbes, Boyd Green and James Graves. Elbert Scott and Milligan won largemouth prizes. Raymond Barnett came in with a prize-winning smallmouth. Bream winners were Daniel Hicks and Bill Gissel.

.22 CALIBER PISTOL LEAGUE

The All Carbide .22 Caliber Pistol League issued its winners for the 1973-74 season. Scratch tops went to T. Lemons, 280.300; K. E. Brewer, 270.154; and E. T. Johnson Jr., 268.917.

Handicap honors were awarded C. M. Barker, 288.322; M. F. Steakley, 288.134; and R. C. Gwaltney, 287.835.

SUMMER BOWLING

Interested in bowling in a summer mixed bowling league? An organizational meeting will be held tonight, May 2, at 7:30 at Ark Lanes, Oak Ridge. Tentative starting time is May 30.

If you are unable to attend tonight's meeting, contact Benny Wood, extension 3-7531; or Edith Duckworth, 3-5341; or call the Recreation Office, 3-5833.

ORNL BOWLING

The ORAU team climbed atop the lead in the A League recently, making a strong pitch for the season's last half. They stand two and one-half points ahead of the Ten Pins.

The C League went to the Pin Heads, hands down. They led the Knuckleheads by a good five and one-half points at the final night of rolling. The Pin Heads faced the Damagers last week in a roll-off for league championship. The Barracudas' G. C. Gierrant rolled a 679 handicap series in the last night of action.

In the ORNL Ladies' League, it was the Mousechasers by a one and one-half point lead over the Pickups. Georgia Guinn paced bowlers by scoring a 226 scratch game, while Mildred Bradley rolled a 567 scratch series.

Al Kerr and Edith Duckworth led individual bowlers in the Family Mixed League recently, rolling scratch series of 529 and 549 respectively. The Oops team is still atop league standings, two in front of the Untouchables.

The Medicine Chest

(Editor's Note: Dr. Lincoln alternates his regular column with "The Medicine Chest," where he answers questions from employees concerning their health in general. Questions are handled in strict confidence, as they are handled in our Question Box. Just address your question to "Medicine Chest," NUCLEAR DIVISION NEWS, Building 9704-2, Stop 20, or call the news editor in your plant, and give him your question on the telephone.)

By T. A. Lincoln, M.D.

QUESTION: "Where and by whom is research being done on Wolff-Parkinson-White syndrome in particular and tachycardia in general? By what mechanism does Inderal work in prevention of paroxysmal atrial tachycardia (PAT)? What are the long-range effects of this medicine? Does it cause fatigue? Is WPW hereditary?"

ANSWER: First, I need to describe this condition so readers can appreciate its importance. In 1930, Drs. Wolff, Parkinson, and White (the late Paul Dudley White, the famous exercising cardiologist who treated President Eisenhower) described an abnormality in the electrocardiogram in healthy young people who were prone to have attacks of extremely rapid heartbeat called paroxysmal atrial tachycardia. The percentage of young people with this ECG abnormality who have these attacks varies widely in different studies. In one study of service men, only 13 percent had attacks, while in several other reports, the percentage varied between 40 and 80 percent. Young people and older patients may have attacks of PAT not associated with WPW, but the mechanism for its production may be similar or may be associated with organic heart disease.

The attacks come on suddenly, with the heart rate precipitously rising, often to 150 beats per minute or faster. Often an attack is precipitated by exercise or excitement, but sometimes there appears to be no reason. When the "heart runs away," as patients describe it, they feel a fluttering sensation in their chests, weak and faint, and sometimes short of breath and nauseated. The attack may last only a few moments, but can sometimes persist for several hours. Usually the victim can stop the attack by holding his breath, straining like when having a bowel movement, bending over, or sticking his finger down his throat to produce gagging. It frequently stops just as suddenly as it started.

Research in many places

In young people, this disorder is a nuisance, but, except in severe cases, it is not dangerous and is compatible with a long life. It occurs in about one to two per thousand population, so most reasonably large school systems will have several kids enrolled who have it.

Research on the basic defect in Wolff-Parkinson-White syndrome is occurring in many locations, especially since there is great fascination in understanding precisely what the basic mechanisms are. Investigators at the University of California at Davis, Washington University School of Medicine in St. Louis, and Harvard Medical School in Boston have published several papers on their studies.

Originally it was thought that WPW was due to the presence of muscular bridges, called bundles of Kent, between the atrial and ventricular chambers of the heart, which allowed an electrical short circuit to occur. Normally the electrical impulse which controls the heart rate occurs in the upper chambers (the atria) and travels along some special nerve fibers, called the bundle of Hiss, to the ventricles. In WPW the electrical impulse could go faster through the muscle bridge than through the bundle of Hiss. It is now known that the presence of such a simple anatomical bridge is not necessary because the ECG abnormality is occasionally incomplete and sometimes intermittent. It can better be explained entirely on an electrophysiological basis.

'Runs in families'

The basic characteristic is the existence of two atrium to ventricle conduction pathways capable of transmitting impulses at two different velocities. It doesn't matter where they are located, and both can actually occur in a normal-appearing bundle of Hiss. In PAT, the impulse descends through one pathway and then back up the other one. When the electrical impulse starts going round and round, the rapid heart rate occurs.

Inderal is the trade name for propranolol. It reduces the frequency of attacks of PAT by a direct depressant effect on the electrical activity of the heart. It appears to be particularly useful when PAT is caused by an underlying WPW. Fatigue and lethargy are fairly common side effects when the drug is used over long periods of time. Long-range toxic effects occur infrequently and may consist of depression of the white blood cell count, and irritation of the nerves in the arms and legs. WPW is congenital in that it is a defect that is either inherited or caused by some sort of early developmental damage to the heart before birth. It "runs in families" but the precise genetics has not been worked out. As usual, boys take it on the chin, since 55 to 70 percent of the cases occur in them.

QUESTION: "Please publish in your column the number of calories in a small and in a long loaf of French bread as sold locally. My husband eats half a large loaf each luncheon and then he wonders why he is so fat!"

ANSWER: I can't answer specifically for local French bread but Bowes and Church, *Food Values of Portions Commonly Used*, gives 58 calories for one average slice weighing approximately 20 grams. I called a local bakery and they said their large loaf weighed on the average 18 ounces or 510 grams. One-half a loaf would be 255 grams, or 12.5 slices. Your husband therefore is eating about 725 calories per meal. I suggest you give him more love, take away his French bread, and put him in one of those weight-reducing groups!

Shift superintendents and utilities lists three promotions in Y-12

Three promotions are announced in the Y-12 Plant by George W. Evans, superintendent of Shift Superintendents and Utilities Division. Dennie B. Goodman has been made a utilities foreman and James D. Warren and Sharon J. Upton have been promoted to engineering aides.

Goodman, a native of Lake City, attended Fulton Vocational Technical School and Hiwassee College and is now attending evening school at The University of Tennessee. He worked as a draftsman with the city of Oak Ridge before joining Union Carbide in 1969.

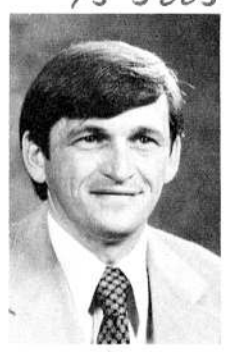
Mrs. Goodman is the former Brenda Viles, and the couple lives at Lake City. They have a son, Jason.

Sharon J. Upton, a native of Sweetwater, came to work in Y-12 as a part-time employee in 1972. She attended San Bernadino (Calif.) Valley College and Drury College, Springfield, Mo. Before joining Union Carbide, she was employed by the Golden State Insurance Company.

Miss Upton came to Y-12 fulltime in 1973. She lives in Sweetwater.

James D. Warren, born in Oak Ridge, attended Troy (Ala.) State College, Cumberland College and is currently attending evening classes at Roane State College. He served as an examinor and instructor pilot on helicopters in Vietnam, and was discharged in 1972 as a captain from the U. S. Army.

James D. Warren Miss Upton



Goodman

His father, J. E. Warren is in Y-12's Fire Department.

Mrs. Warren is the former Penny Rose, and they live at 109 Arizona Road, Oak Ridge, with their two children, James D. Jr., and Andrew.

NEW AIChE OFFICERS — The Knoxville-Oak Ridge section of the American Institute of Chemical Engineers recently installed officers. From left are Charles D. Scott, director; Thomas W. Pickel, director; Charles W. Cunningham, director; Paul A. Haas, secretary; Hank D. Cochran, membership chairman; James W. Snider, career guidance chairman; Edward S. Clark, director; Kent A. Williams, public relations chairman; Howard A. McLain, chairman-elect; Jack S. Watson, treasurer; John P. Sanders, retiring chairman and director; and J. Robert Hightower, chairman.

Summertime Warning

In the good old summertime, the American Cancer Society has an old refrain - use common sense in the sun - beware of over-exposure. That's the best way to prevent skin cancer.

Joint ASM-ANS meet

There will be a joint meeting of the American Society for Metals and the American Nuclear Society Wednesday, May 8. The speaker will be Thomas A. Nemzek, director of the Division of Reactor Research and Development, US AEC, Washington. His talk will be titled "Advanced LMFBR Development - beyond the LMFBR Demonstration Plant." The dinner meeting will begin at 6:30 p.m. at the Ramada Inn, Knoxville. Additional information and reservations may be made through Glenn Northcutt, extension 3-7515.

No man is free who cannot command himself.

Epictetus

Metals and Ceramics Division reports organization changes

Several organizational changes in the Metals and Ceramics Division at ORNL were announced recently by James R. Weir, Director.

Included in the changes are the dissolution of the long range planning group and the establishment of a steel technology group.

William R. Martin will be manager of the Engineering Materials Section. Groups reporting to this section will be mechanical properties, materials compatibility, nondestructive testing, welding and brazing, and steel technology.

Troy N. Washburn will serve as manager of the Fuels and Processes Section. Reporting to his section will be casting and forming technology, fuel cycle engineering and development, studies and evaluation, carbon development, ceramic and powder development, materials irradiation engineering, TURF operations and special projects.

George M. Adamson will manage the Division Services Section. Reporting in this section will be engineering and administrative services, publications and records, safety and radiation control, technical editing, budget and accounting, quality assurance, TRU operations and the metallography laboratories.

Appointed as program managers were A. L. "Pete" Lotts, Peter Patriarca, Herbert E. McCoy and James L. Scott. Lotts will manage the Gas Cooled Reactor and Thorium Utilization Programs; Patriarca will manage the Liquid Metal Fast Breeder Reactor Fuels and Materials Program; McCoy will manage the Molten Salt Reactor Program; and Scott will manage the Controlled Thermonuclear Research Program.

Domenic A. Canonico and Charles R. Brinkman were appointed group leaders of the steel technology and engineering mechanical properties groups, respectively.

Jack E. Cunningham remains associate director of the Division.

PATENTS Granted

To James C. Mailen, Norman G. Anderson, Charles D. Scott, Carl A. Burtis and Wayne F. Johnson, ORNL, for "Compact Dynamic Multistation Photometer Utilizing Disposable Cuvette Rotor."

To Terrence B. Lindemer, ORNL, for "Nuclear Fuel for High Temperature Gas-Cooled Reactors."

Volcano is probed for ancient secrets

Things are looking down at Los Alamos, N.M.

Scientists at the Atomic Energy Commission's Los Alamos Scientific Laboratory, are probing an ancient volcano, known as the Jemez Caldera, whose titanic eruptions shaped much of northern New Mexico's terrain.

Work has begun on the western flank of the extinct volcano to study the extraction of geothermal energy from dry, hot rocks. It is believed that by drilling down 1.3 kilometers (4.251 feet) or more, a region of granite at 150° C (302° F) will be encountered. If so, attempts will be made to hydraulically fracture the rock near the bottom of the hole.

Success will lead to drilling two deeper holes this summer. If these meet expectations, pumping, control, and heat exchanger systems will be installed by the first half of 1975. Water will be pumped into the fractured zone to pick up heat and circulated under pressure to bring it out, and the world's first experimental facility for extracting dry heat energy from deep within the earth would go into operation.

J. R. Weir, ORNL, named distinguished alumnus

Y 109009

James R. Weir Jr.

James R. Weir, Director of ORNL's Metals and Ceramics Division, was one of the recipients of the 1974 Distinguished Alumnus Award given by the University of Cincinnati's College of Engineering.

The award is presented annually to "outstanding Alumni who by their achievements, service and stature have reflected an unusually large measure of credit" on the University.

In addition to his degree in metallurgical engineering from the University of Cincinnati, Weir has an M.S. degree from The University of Tennessee. He is also a registered professional engineer.

Weir, who in 1973 received the AEC's E.O. Lawrence Award, came to work at ORNL in 1955. He has been credited by experts in the metallurgical field as the investigator most responsible for the development of corrective methods for overcoming the high-temperature embrittlement of stainless steel and nickel-base alloys resulting from neutronically-generated helium.

Weir holds membership in the following professional organizations: American Society for Metals, Sigma Xi, American Association for the Advancement of Science, American Welding Society and American Nuclear Society.

He is the author of over 80 publications and has been granted several patents.

Weir, his wife, Lois, and their five children live in Oak Ridge.

Division Retirees

PH 74-1158 PH 74-1119

Easler Gentry

PH74-1118 PH74-1117

Hyde Sayne

Two veteran Oak Ridge Gaseous Diffusion Plant employees retired recently, and two more will retire at the end of this month.

Carroll H. Easler, Operations Division, will end more than 30 years service at the end of May. He lives at 127 Athens Road, Oak Ridge.

David E. Gentry, fabrication shop department, recently completed 28 years service. He retired May 1 to his home at 4924 Governorwood Drive, Powell.

James A. Hyde, who also retires at the end of this month, joined Union Carbide in 1944. He lives at Route 3, Athens, and worked in the Fabrication and Maintenance Division.

Charles E. Sayne, who retired May 1, was in the guard department. He joined ORGDP in 1944 and lives at Route 2, Kingston.

Brashier

Raymond Q. Brashier retired from ORNL's Plant and Equipment Division May 1. Brashier, a machinist, came to work at ORNL over 21 years ago.

He and his wife, Billie, live at 4124 Royal View Road, Knoxville. They have a son and a daughter.

Richard G. Reinhardt was a research staff member in the Thermonuclear Division. He retired with over 30 years of company service.

MANUFACTURING ENGINEERS MEET

The Knoxville-Oak Ridge Chapter of the Society of Manufacturing Engineers will meet May 9 at the Holiday Inn West, Knoxville. Speaker will be J. E. Smallwood, manager of Bendix Sonic Energy Application Research Laboratories. He will speak on "Sonic Energy Cleaning."

The meeting will begin at 6:30 p.m., with dinner at 7, and the technical session at 8. Prospective members are invited to attend.

Common But . . .

Indigestion is a common complaint, but persistent indigestion, heartburn, nausea, loss of appetite should send you to your doctor. That's the word from the American Cancer Society.

UNION CARBIDE
UNION CARBIDE CORPORATION
NUCLEAR DIVISION
P. O. BOX Y, OAK RIDGE, TENNESSEE 37830

ADDRESS CORRECTION REQUESTED

BULK RATE
U.S. Postage
PAID
Union Carbide Corporation